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Robert N. Fuhrman

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EXAMINER

NGUYEN, NGA B

ART UNIT

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3692

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DELIVERY MODE

03/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/997,085	<b>Applicant(s)</b> FUHRMAN ET AL.	
	<b>Examiner</b> Nga B. Nguyen	<b>Art Unit</b> 3692	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office Action is the answer to the communication filed on December 15, 2008, which paper has been placed of record in the file.
2. Claims 1-37 are pending in this application.

### ***Response to Arguments/Amendment***

3. Applicant's arguments with respect to claims 1-37 have been fully considered but are not persuasive.

In response to the applicant's arguments that Baker does not disclose *"determining a value for each of said plurality of factors for each of said at least two instruments" and "forming with one of said one or more computer processors a covariance matrix, said covariance matrix including a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity attributed to said corresponding one of said plurality of factors"*, examiner disagrees. Examiner submits that Baker discloses in figures 1A, 1B and column 5, line 10 through column 6, line 60 that the *covariance of stock 1 with stock 2 is calculated based on at least the weighting of: the returns for each security, the weight in the portfolio of each security, the total return on the portfolio, the total return on target or standard, standard deviation, the average return on portfolio, the average return on target or standard portfolio of assets, etc. (said plurality of factors), wherein the returns for each security and the total return on the portfolio is calculated based on at least the*

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*value of: prices of securities, market capitalization, trading volume, etc. (said plurality of factors).*

In response to the applicant's argument regarding to the well-known statement, examiner submits that applicant has not "specifically pointed out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art." Therefore, any well-known statement taken in rejecting the claims is taken to be admitted prior art, because applicant's traversal was inadequate.

In conclusion, for the reason set forth above, examiner decides to maintain the rejection (also see details below) and make this Office action FINAL.

4. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 31-34 and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by Baker, U.S. Patent No. 6,336,103.

Regarding to claim 31, Baker discloses a method for determining the comparability of at least two instruments, wherein said method is implemented with a computer system comprising one or more computer processors, said method comprising the steps of:

identifying with one of said one or more computer processors a plurality of factors associated with said at least two instruments (*column 7, lines 30-40, the returns for each security in the prior periods, the weight in the portfolio of each security, market capitalization, trading volume, recent prices, specific identifiers and estimated bid/ask price spreads*);

determining with one of said one or more computer processors a value for each of said plurality of factors for each of said at least two instruments (*column 6, lines 1-60, value of the returns for each security, the weight in the portfolio of each security, etc.*);

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forming with one of said one or more computer processors a covariance matrix, said covariance matrix including a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity attributed to said corresponding one of said plurality of factors (*figures 1A-1B and column 7, line 63-column 8, lines 35, calculating the covariance of each security with the target index*);

determining with one of said one or more computer processors the comparability of said at least two instruments based on said values for each of said at least two bonds and said covariance matrix (*column 5, line 65-column 6, line 65, determining the covariance of stock 1 with stock 2*),

Regarding to claim 32, Baker further discloses wherein said instruments are equities and said values for said plurality of factors for each of said at least two instruments relate to sector information, volatility, profitability measures, market capitalization, price-to-earnings ratio (*column 7, lines 30-40*).

Regarding to claim 33, Baker further discloses wherein said market activity are price changes in the market for a previous period of time (*column 7, lines 32-35*).

Regarding to claim 34, Baker further discloses wherein said period of time is in the range of one week to 1 year (*column 7, lines 32-35*).

Regarding to claim 37, Baker further discloses tuning said covariance matrix by adjusting said weighting factor for at least one of said plurality of factors (*column 8, lines 20-27, adjusting the individual security weights*).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-30, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker, U.S. Patent No. 6,336,103.

Regarding to claim 1, Baker discloses method for determining the comparability of at least two stocks, wherein said method is implemented with a computer system comprising one or more computer processors, said method comprising the steps of:

identifying with one of said one or more computer processors a plurality of factors associated with said at least two stocks (*column 7, lines 30-40, the returns for each security in the prior periods, market capitalization, trading volume, recent prices, specific identifiers and estimated bi/ask price spreads*);

determining with one of said one or more computer processors a value for each of said plurality of factors for each of said at least two stocks (*column 7, lines 48-63, a maximum and minimum percentage weight of the portfolio for each security can be specified to constrain the portfolio*);

forming with one of said one or more computer processors a covariance matrix, said covariance matrix including a weighting factor for each of said plurality of factors wherein each of said weighting factors relates to an amount of market activity attributed

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to said corresponding one of said plurality of factors (*figures 1A-1B and column 7, line 63-column 8, lines 35, calculating the covariance of each security with the target index*);

determining with one of said one or more computer processors the comparability of said at least two stocks based on said values for each of said at least two stocks and said covariance matrix (*column 5, line 65-column 6, line 65, determining the covariance of stock 1 with stock 2*),

Baker does not disclose comparing two bonds. However, bond is a well-known financial instrument. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Baker's to adopt the teaching of Baker for comparing two bonds, for the purpose of providing more efficiency in comparing two bonds.

Regarding to claim 2, Baker further discloses wherein said values for said plurality of factors for each of said at least two stocks relate to sector information, stock rating information, a duration and a time to maturity (*column 5, lines 50-63*).

Regarding to claim 3, Baker does not disclose wherein said values relate to an issuer country, a put schedule, a call schedule, a sinking fund schedule, a coupon rate and an asset swap spread. However, those factors are well known in the art of bond's factors. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Baker's to adopt the teaching of Baker for comparing two bonds using the well-known bond's factors above, for the purpose of providing more efficiency in comparing two bonds based on the values of relate to an issuer country, a put schedule, a call schedule, a sinking fund schedule, a coupon rate



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and an asset swap spread.

Regarding to claim 4, Baker further discloses wherein said market activity are price changes in the market for a previous period of time (*column 7, lines 32-35*).

Regarding to claim 5, Baker further discloses wherein said period of time is in the range of one week to 1 year (*column 7, lines 32-35*).

Regarding to claims 6-7, Baker does not disclose wherein the step of determining the comparability includes the step of: determining the comparability according to the specific formulas recited in the claims. However, determining the comparability according to the specific formulas is the method of choice. In this case, the formulas recited in the claims depend on: the values for plurality of factors for a first of stock, the values for plurality of factors for a second of stock and the covariance matrix. Baker discloses the values for plurality of factors for a first of stock, the values for plurality of factors for a second of stock and the covariance matrix, thus, it is obvious in Baker to create any specific formulas depend on those values. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Baker's to adopt the teaching of Baker for comparing two bonds with the method of choice above, for the purpose of providing more efficiency in comparing two bonds.

Regarding to claim 8, Baker further discloses tuning said covariance matrix by adjusting said weighting factor for at least one of said plurality of factors (*column 8, lines 20-27, adjusting the individual security weights*).

Claim 9 contain similar limitations found in claim 1 above, therefore, is rejected by the same rational.

Regarding to claim 10, Baker further discloses ordering each bond in said list of bonds according to the comparability of each bond in said list of bonds to said primary bond (*figure 1B, step 36, rank the covariances for all potential assets*).

Claim 11 contain similar limitations found in claim 1 above, therefore, is rejected by the same rational.

Claims 12-19 contain similar limitations found in claims 1-8 above, therefore, are rejected by the same rationale.

Claims 20-29 are written in apparatus and contain similar limitations found in claims 1-8 above, therefore, are rejected by the same rationale.

Regarding to claim 30, Baker further discloses wherein said comparability calculator executes on a computer system and further comprising an access device in communications with said computer system for issuing a comparability request to said comparability generator (*column 9, lines 24-45*).

Claims 35-36 contain similar limitations found in claims 6-7 above, therefore, are rejected by the same rationale.

### ***Conclusion***

9. Claims **1-37** are rejected.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Nga B. Nguyen whose telephone number is (571) 272-6796. The examiner can normally be reached on Monday-Thursday from 9:00AM-6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Abdi can be reached on (571) 272-6702.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3600.

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

Or faxed to:

(571) 273-8300 (for formal communication intended for entry),

or

(571) 273-6796 (for informal or draft communication, please label "PROPOSED" or "DRAFT").

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nga B. Nguyen/

Primary Examiner, Art Unit 3692

March 9, 2009